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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/622,901

07/17/2003

Tomomi Yoshizawa

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4583

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7590

11/12/2004

FRISHAUF, HOLTZ, GOODMAN & CHICK, PC

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NEW YORK, NY 10017-2023

EXAMINER

SHAH, MANISH S

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 11/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/622,901	Applicant(s) YOSHIZAWA ET AL.	
	Examiner Manish S. Shah	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/05/03</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claim 10 is objected to because of the following informalities: Applicant claimed "the mean particle diameter of the resin fine particle is from 50 to 500 μm ", which is wrong, it suppose to be 50 to 500 nm. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5 & 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaga et al. (# US 2002/0008747 A1).

Kaga et al. discloses an inkjet recording method including ejecting an ink containing pigment ([0082]-[0086]), water and an organic solvent ([0080]) onto an image receiving medium (see Abstract), wherein the image receiving medium includes; a support member having a non-solvent-permeable resin layer (polyolefin coated paper) ([0067]), and an ink image receiving layer, which is provided on the support member, having laminated layers of a solvent absorbing layer containing inorganic fine particles and a binder ([0051]-[0062]), and a surface portion layer containing resin fine particles,

an inorganic pigment and a binder ([0036]-[0049]); and conducting a heating and pressing treatment onto the image receiving medium by a heating and pressing device ([0070]), wherein the heating and pressing treatment satisfies conditions of following expressions (1) and (2) at the same time, $(T - T_G) \times t > 6$, and $(T - T_M) \times t < 3$, wherein, T represents a surface temperature ($^{\circ}\text{C}$) of a member of the heating and pressing device, which is arranged on the ink image receiving layer side of at the position where heating and pressing treatment is conducted; T_G represents a glass transition temperature of the resin fine particles ($^{\circ}\text{C}$); t represents a processing time (second) of the heating and pressing treatment; and T_M represents a melting temperature ($^{\circ}\text{C}$) of the non-solvent-permeable resin layer ([0073], [0048]). They also disclose that a thickness of the surface portion layer is from 3 to 10 μm ([0045]). They also disclose that the support member is paper and the non solvent permeable resin layer and the melting point of non-solvent-permeable resin layer is from 100 to 180 $^{\circ}\text{C}$, wherein the non-permeable resin layer is polyolefin resin ([0067]). They also disclose that the glass transition temperature of the resin fine particle is from 50 to 130 $^{\circ}\text{C}$ ([0048]), and a mean particle diameter is from 50 to 1000 nm ([0043]). They also disclose that the pressure of the heating and pressing device is not less than 0.6 Mpa ([0075]).

3. Claims 12-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaga et al. (# US 2002/0008747 A1).

Kaga et al. discloses an inkjet recording apparatus including a recording head ([0105]) for ejecting an ink containing pigment ([0082]-[0086]), water and an organic

solvent ([0080]) onto an image receiving medium (see Abstract), wherein the image receiving medium includes; a support member having a non-solvent-permeable resin layer (polyolefin coated paper) ([0067]), and an ink image receiving layer, which is provided on the support member, having laminated layers of a solvent absorbing layer containing inorganic fine particles and a binder ([0051]-[0062]), and a surface portion layer containing resin fine particles, an inorganic pigment and a binder ([0036]-[0049]); and conducting a heating and pressing treatment onto the image receiving medium by a heating and pressing device ([0070]), wherein the heating and pressing treatment satisfies conditions of following expressions (1) and (2) at the same time, $(T - T_G) \times t > 6$, and $(T - T_M) \times t < 3$, wherein, T represents a surface temperature ($^{\circ}\text{C}$) of a member of the heating and pressing device, which is arranged on the ink image receiving layer side of at the position where heating and pressing treatment is conducted; T_G represents a glass transition temperature of the resin fine particles ($^{\circ}\text{C}$); t represents a processing time (second) of the heating and pressing treatment; and T_M represents a melting temperature ($^{\circ}\text{C}$) of the non-solvent-permeable resin layer ([0073], [0048]). They also disclose that the apparatus further includes an endless belt, which houses the heated roller, and wherein heated roller or endless belt is covered with silicone resin ([0070]-[0076]; figure: 1-3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4 & 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaga et al. (# US 2002/0008747 A1) in view of Nashikawa (# US 6688741).

Kaga et al. discloses all the limitations of the ink jet recording method except that the porosity of the ink image receiving layer is from 30 to 70 % and thickness of the solvent absorbing layer is 25 to 40 μm .

Nashikawa teaches that to get the good ink absorbability and gives an appropriate print size, ink image receiving layer has porosity from 20 to 70% (column: 4, line: 54-65) and thickness of the ink receiving layer is 5 to 25 μm (column: 5, line: 5-15).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the image receiving layer of Kaga et al. by the aforementioned teaching of Nashikawa in order to have a recording medium with good ink absorbability and gives an appropriate print size.

5. Claims 17 & 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaga et al. (# US 2002/0008747 A1) in view of De Block et al. (# US 5893018).

Kaga et al. discloses all the limitations of the ink jet recording method except that the heat roller or belt has a surface roughness of not more than 80 nm.

De Block et al. teaches that to get the glossy printed image, image forming apparatus includes the heat roller or belt has a surface roughness of not more than 200 nm (0.2 micrometer) (column: 7, line: 10-27).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the inkjet recording apparatus of Kaga et al. by the aforementioned teaching of De Block et al. in order to get the glossy printed image.

Conclusion

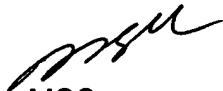
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (571) 272-2152. The examiner can normally be reached on 7:00am-3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2853

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Manish S. Shah
Examiner
Art Unit 2853


MSS
11/8/04